CLAIMS:

1. A method of allocating payload space, the method including steps of:

(a) obtaining identification parameters relating to programme data content (PC), said identification parameters including at least one or more user identifiers (UID) and one or more programme content identifiers (CID);

(b) storing said identification parameters (UID, CID) in one or more databases (30);

(c) generating one or more transaction numbers (nTR) capable of being uniquely mapped to corresponding identification parameters (UID, CID) stored in the one or more databases (30); and

(d) generating watermark information for carrying said one or more transaction numbers (nTR) and embedding said watermark information as an optimized payload (OPL) into said programme data content (PC) to generate corresponding watermarked data content (WPC).

2. A method according to Claim 1, further comprising a step of supplying said watermarked programme content (WPC) to one or more users (220), wherein the one or more transaction numbers (nTR) are capable of being detected in the water marked programme content (WPC) when received by said one or more users (220) for use in accessing corresponding identification parameters (UID, CID) stored in the one or more databases (30).

3. A method according to Claim 1, wherein fingerprint information (FP) of the programme content (PC) is stored in the one or more databases (30) together with its associated identification parameters (UID, CID).

4. A method according to Claim 1, wherein verification of the identification parameters (IUD, CID, FP) with the watermarked programme content (WPC) at the one or more users (220) is implemented as an automatic process without the one or more users (220) needing to intervene.

5. A method according to Claim 1, including a further step of identifying whether or not the watermarked programme content (WPC) has been legitimately received by the one or more users (220) by checking whether the received watermarked programme content (WPC) has a payload (OPL) whose transaction number (nTR) invokes identification parameters stored in the one or more databases (30) consistent with the received programme content (WPC).

6. A method according to Claim 1, wherein the one or more transaction numbers (nTR) are included in the watermarked programme content (WPC) after being encrypted with an encryption key (K_{PL}).

7. A method according to Claim 1, wherein the identification parameters (UID, CID) stored in the one or more databases (30) are commonly accessible to a supplier of the programme content (PC) and one or more of the users (220) authorised to access said parameters (UID, CID).

8. A method according to Claim 1, wherein the identification parameters are writable into the one or more databases (30) by a supplier of the programme content (PC) and the one or more users (220) are restricted only to reading the identification parameters from the one or more databases (30).

9. Watermarked programme content (WPM) including a watermark whose payload space is allocated optimally according to a method of Claim 1.

10. A watermark including a payload whose payload space is allocated optimally according to a method of Claim 1.

11. Software executable on one or more computing devices for implementing the method of Claim 1.

12. An apparatus (10, 100) for allocating payload space, the apparatus (10, 100) including:

(a) data collecting means for obtaining identification parameters relating to programme data content (PC), said identification parameters including at least one or more user identifiers (UID) and one or more programme content identifiers (CID);

(b) one or more databases (30) for storing said identification parameters (UID, CID);

(c) generating means for generating one or more transaction numbers (nTR) capable of being uniquely mapped to corresponding identification parameters (UID, CID) stored in the one or more databases (30);

(d) data processing means for generating watermark information carrying said one or more transaction numbers (nTR), and processing means for embedding said watermark information as an optimized payload (OPL) into the programme content (PC) to generate corresponding watermarked programme content (WPC).

13. A method of authenticating watermarked programme content (WPC) whose embedded watermark information includes an optimised payload (OPL) including one or more transaction numbers (nTR) which are mapped; preferably uniquely mapped, to corresponding identification parameters (UID, CID, FP) stored in one or more databases, the method including steps of:

(a) receiving the watermarked programme content (WPC) at one or more authorized users;

(b) extracting watermark information from the received watermarked programme content (WPC);

(c) determining a payload (OPL) included in the watermark information, said payload including one or more transaction numbers (nTR);

(d) using said one or more transaction numbers (nTR) to access corresponding identification parameters from said one or more databases (30), said identification parameters (UID, CID, FP) including a program content fingerprint (FP);

(e) obtaining a locally extracted fingerprint (FPL) of said received watermarked program content (WPC);

(f) checking whether or not said locally extracted fingerprint (FPL) matches said program content fingerprint (FL) obtained from said one or more databases (30) to determine authenticity of the watermarked programme content (WPC).